

# Internet of Things

## PRACTITIONERS COURSE

---

**The Internet of Things (IoT) refers to the growing range of connected devices that send data across the Internet.**

The IoT is now a reality due to the convergence of several technologies.

A “Thing” is any object or device with embedded electronics that can transfer data over a network – without any human interaction. So, imagine if you had smart devices in your car, your workplace or even on yourself.

The IoT can help transform industries leveraging cutting-edge technologies such as cloud, artificial intelligence, and blockchain, using information gathered in real-time by thousands of sensors globally.

IBM Global University Programs



## About this course

This course explores the topics, technology and skills required to gain practice in the successful implementation of IoT solutions.

**IoT Practitioners** – extract real-world data from sensors in devices, integrate them to services in the cloud, and using analytics and artificial intelligence, extract valuable insights to improve enterprise operations and enable innovative, new industry business models.


### Audience

Individuals with an active interest in applying for entry level jobs relevant to implementing IoT solutions.

Prerequisite skills for this course:

- *Basic IT literacy skills*
- *Fundamentals of measuring the physical world by computer, such as temperature*
- *Concept of non-conventional computers embedded in equipment*

### Journey

 80 hours

- **25% Concepts**  
Expanding the knowledge and understanding of the topic through lecture training, examples, videos and quizzes.
- **35% Technologies**  
Actual implementation of the concepts learned through simulations, hands-on labs and games.
- **40% Industry Use Cases**  
Realization of the real-world impact of the topics covered through the exposure to industry case studies.



### Objectives

- Understand the evolution and impact of IoT in the world today.
- Explore IoT by industry domains: automotive, connected homes, manufacture, energy and utilities, transportation, healthcare, aerospace.
- Explore end-to-end case studies for every key IoT industry and identify common patterns.
- Understand technical aspects of IoT solutions: devices and networks, data, cloud, applications, blockchain, analytics and security.
- Build cognitive IoT solutions, leveraging artificial intelligence and data science.
- Understand industry practices to design and build agile IoT solutions, using the design thinking methodology.
- Work in teams jointly exploring real-world IoT scenarios.
- Prototype bespoke IoT solutions leveraging industry-proven concepts, technologies and methodologies.



As almost everything – from cars to crops to airports – becomes connected, IoT is changing the way the world works

[ibm.com/IoT](https://ibm.com/IoT)